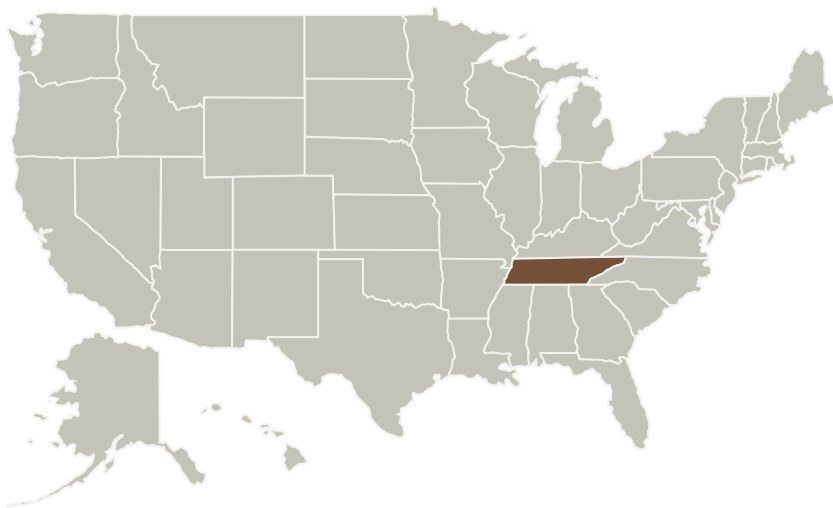




Project Introduction

Previous studies and large photometric surveys suggest that eclipsing binaries have a peak in the period distribution around 1 day, but binary formation theories struggle to create these short-period systems in situ. Theories have been proposed to tighten the inner-binary after its initial formation through a variety of mechanisms - some of which require the presence of a third stellar component. By identifying and then studying triple systems which can test the predictions of these theories, as well as the statistics of the multiple star population as a whole, we hope to gain a better understanding of binary formation and evolution.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
Vanderbilt University	Supporting Organization	Academia	Nashville, Tennessee

Primary U.S. Work Locations

Tennessee



Astrophysics of Stellar Triples

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Organizational Responsibility

Responsible Mission Directorate:

Science Mission Directorate (SMD)

Responsible Program:

Astrophysics

Project Management

Program Manager:

Joe Hill-kittle

Continued on following page.



Project Management (cont.)

Principal Investigator:

Keivan G Stassun

Co-Investigators:

Kyle Conroy

Sarah B Dumais

Technology Areas

Primary:

- TX07 Exploration Destination Systems
 - └ TX07.1 In-Situ Resource Utilization
 - └ TX07.1.4 Resource Processing for Production of Manufacturing, Construction, and Energy Storage Feedstock Materials

Target Destination

Outside the Solar System